

APPENDIX C. U.S. FISH & WILDLIFE SERVICE LETTER and OTHER LETTERS



United States Department of the Interior

Fish and Wildlife Service

Bloomington Field Office (ES)
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U.S.
FISH & WILDLIFE
SERVICE



January 12, 2006

Mr. Robert Waltz
Indiana DNR, Division of Entomology and Plant Pathology
402 West Washington Street, Room 290
Indianapolis, Indiana 46204

Dear Mr. Waltz:

The U.S. Fish and Wildlife Service (FWS) has reviewed your letter of December 15, 2005 regarding the 2006 gypsy moth treatment program for 38 sites in 11 Indiana counties (Allen, Elkhart, Kosciusko, LaGrange, LaPorte, Marshall, Noble, Porter, Scott, St. Joseph, Whitley). We are submitting the following comments on the 2005 program.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

The plan submitted in your letter includes aerial spraying of mating disruption pheromone flakes (Disrupt IT) at 8 sites (46,097 acres), and aerial spraying of *Bacillus thuringiensis* biological control (Btk) at 18 sites plus 3 core area sites within larger pheromone treatment areas (13,910 acres), all with federal funding assistance. Additionally, ground application of Dimilin to selected trees is proposed at 9 sites. Dimilin application in 2006 is a State of Indiana action with no federal funding assistance.

Endangered butterflies

One of the proposed treatment methods, spraying with *Bacillus thuringiensis* (Bt), is of concern for 2 federally endangered species of Lepidoptera in Indiana, the Karner blue butterfly (*Lycaeides melissa samuelis*) and Mitchell's satyr butterfly (*Neonympha mitchellii*). The known occurrences of these 2 endangered species are in the northern portions of Lake and Porter Counties (Karner blue butterfly), and isolated locations in LaPorte and LaGrange Counties (Mitchell's satyr). The range of these species has not changed since our review of the 2005 gypsy moth program. Neither species is known to occur within or adjacent to the Btk sites identified in your letter, however the Portage Btk treatment site (900 acres) is within a mile of the Karner blue butterfly population in and around the Indiana Dunes National Lakeshore (UDNL). It is imperative that

aerial spraying of Btk at the Portage site be conducted in a manner that will avoid any drift into the Karner blue butterfly populations areas. LDNL staff can provide more information on the specific areas of concern. Treatment with Disrupt II pheromone flakes, which is considered to be highly specific for gypsy moths, will have no adverse impacts on the federally listed butterflies.

Other Endangered Species

The proposed treatment sites are within the range of the federally endangered Indiana bat (*Myotis sodalis*), and federally threatened bald eagle (*Haliaeetus leucocephalus*) and copperbelly water snake (*Nerodia erythrogaster neglecta*). The Darden Road treatment site is adjacent to occurrence records of the copperbelly water snake, which center around the Mud Lake/Deer Lake/Twin Lake complex. We do not anticipate adverse effects on copperbelly water snakes or bald eagles from any treatments at this time, because both species' forage base consists mainly of vertebrates.

Indiana bats hibernate in caves, then disperse to reproduce and forage in relatively undisturbed forested areas associated with water resources during spring and summer. Young are raised in nursery colony roosts in trees, typically near drainageways in undeveloped areas. Prior to hibernation, Indiana bats feed intensively in forested areas near hibernacula in order to build up adequate fat reserves to survive hibernation.

The diet of Indiana bats consists entirely of insects. Based on previous studies they appear to be somewhat opportunistic feeders. Some studies have found lepidopterans as a major dietary component, while others found a diet dominated by terrestrial Coleopterans or aquatic insects. Most of these studies were essentially "snapshots" and there is a lack of comprehensive, long-term research. It is possible that under some circumstances extensive elimination of a broad range of lepidopteran species over a large habitat area has the potential to adversely affect the food base of an Indiana bat nursery colony. This concern increases greatly with the use of Dimilin because it kills a much broader range of insects. None of the proposed treatment areas are near Indiana bat hibernacula. Most of the 2006 Btk aerial treatment sites are limited to relatively small areas of Indiana bat summer habitat, however based upon the aerial photos you provided we identified a few sites where a substantial amount of suitable forested summer habitat occurs within an aerial treatment area. These sites are listed below in descending size of affected forest:

1. Huntertown North 06 site (Allen County, 1434 acre treatment area), 600 acres of forest (our estimate).
2. Lilac Road site (St. Joseph County, 467 acre treatment area) and Osceola-Elkhart South site (Elkhart County, 3551 acre treatment area), 300-350 acres of forest at each site.
3. Wolcottville site (Noble County, 1910 acre treatment area), Portage site (Porter County 909 acre treatment area), Springville site (LaPorte County, 389 acre treatment area) and Crothersville 06 site (Scott County, 378 acre treatment area), 200-250 acres of forest at each site.

The link between loss of a lepidopteran forage base for Indiana bats and adverse effects on the species is uncertain, therefore at this time we consider the likelihood of take to be discountably small. However, to minimize impacts on foraging Indiana bats we recommend that aerial spraying at the sites listed above be conducted as early as possible in the season. The Indiana bat summer occupancy season is considered to begin in mid-April, probably slightly later in northern Indiana. If future programs incorporate large scale application of Dimilin, or propose BT aerial application over very large areas of Indiana bat summer or winter habitat, this issue will have to be reevaluated.

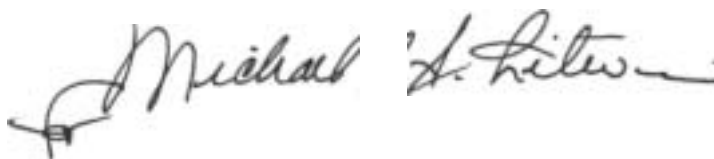
The FWS concludes that the federally assisted 2006 gypsy moth program is not likely to adversely affect any of these federally listed species, subject to the aforementioned concern about avoiding Btk drift toward the karner blue butterfly population at IDNL.

This precludes the need for further consultation on this project as required under Section 7 of the Endangered Species Act of 1973, as amended. If, however, new information on endangered species at the site becomes available or if project plans are changed significantly, please contact our office for further consultation.

All of the Dimilin treatment sites (which are not federal actions in 2006) are limited to very small areas with application limited to selected trees, and are not near any current endangered species occurrence records. Federally listed species are not likely to be adversely affected at any of those sites.

For further discussion, please contact Mike Litwin at (812) 334-4261 ext. 205.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Michael J. Litwin". The signature is fluid and cursive, with a large initial "M" and a stylized "L".

Scott E. Pruitt Supervisor

cc: Christie Keifer, Indiana Division of Fish and Wildlife, Indianapolis, IN Katie Smith, Indiana Division of Fish and Wildlife, Indianapolis, IN USFWS, Chesterton, IN - Phillip Marshall, IDNR, PO Box 218, Vallonia, IN 47281

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**State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Water**

Early Coordination/Environmental Assessment

DNR #: ER-11906

Request Received: December 12, 2005

Requestor:

Indiana Department of Natural Resources
Bob Waltz
Division of Entomology & Plant Pathology
402 West Washington Street, W290
Indianapolis, IN 46204

Project

County/Site info:

2006 Proposed Gypsy Moth Treatment Sites
Allen- Elkhart - Kosciusto - LaGrange - LaPorte - Marshall - Noble - Porter - Scott - St Joseph -
WhiiJey Counties

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

Regulatory Assessment:

Formal approval by the Department of Natural Resources under the regulatory programs administered by the Division of Water is not required for this project.

Natural Heritage Database:

The Natural Heritage Program's data have been checked.
Overall, the approach to use mating disruption pheromone flakes, as opposed to Btk or Dim, in areas with natural habitat seems prudent. Although we have very little data on lepidopterans in these areas, we know from surveys in similar habitats elsewhere, that rare butterflies and moths do use these habitats.

Proposed treatment sites that will be treated using pheromone flakes, and that contain possibly sensitive habitat include Chain O' Lakes, Noble County, and Northwest Allen MD 06, Allen County. The 6.111 acre Chain O' Lakes treatment site encompasses Chain O'Lakes State Park. Likewise, at 24,938 acres, the Northwest Allen MD 06 treatment site encompasses Rodenbeck Nature Preserve, Bicentennial Woods Nature Preserve, Barrett Oak Hill Nature Preserve, and a segment of the state designated Cedar Creek Natural and Scenic River. We have some concerns for impacts to native lepidopterans at these locations, but have no documented occurrences of any rare species within these areas.

Mengerson Nature Preserve, which is a dedicated nature preserve owned by Acres Land Trust, is located within the Fort Wayne East treatment site, Allen County, and is scheduled for treatment with Btk. There are no documented occurrences of rare lepidopteran species at this location; however, we request that the treatment be done in the most sensitive manner possible to prevent adverse impacts to non-target lepidopteran species.

The Springville treatment site, La Porte County, scheduled for treatment with Btk, is located within 1 mile, and west-southwest of Springfield Fen Nature Preserve, which contains a significant calcareous fen wetland community and numerous state-listed plant and animal species. Numerous occurrences of rare lepidopteran species are known from Springfield Fen, so care should be used to avoid any impacts to this significant and sensitive area.

THIS IS NOT A PERMIT

**State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Water**

Early Coordination/Environmental Assessment

Fish & Wildlife Comments. The impacts of this gypsy moth control effort are impossible to predict. However, the devastating effects of uncontrolled gypsy moth infestations are well documented. At this time, no harm to state or federal listed species, resulting from the proposed control measures, is known or anticipated. The potential harm from the project is less than the potential harm to these same species from an uncontrolled gypsy moth infestation.

The US Fish and Wildlife Service will provide their own comments regarding the impacts to federally listed species, especially the Karner blue and Mitchell's satyr butterflies that occur within counties to receive treatment.

Contact Staff: Christie L. Stanifer, Environ. Coordinator, Environmental Unit
Our agency appreciates this opportunity to be of service. Please do not hesitate to contact the above staff member at (317) 232-4160 or 1-877-928-3755 (toll free) if we can be of further assistance.

A handwritten signature in dark ink, appearing to read 'Jon Eggen', is written over a horizontal line. Below the line, the name 'Jon Eggen' is printed in a small, bold, sans-serif font.

Date: February 13, 2006

Jon W. Eggen
Environmental Supervisor
Division of Fish and Wildlife



Indiana Department of Natural Resources

Division of Historic Preservation & Archaeology 402 West Washington Street, W219 Indianapolis, IN 46204-2739
Phone 317-232-1000/ fax 317-232-4903 - dnp@dnr.in.gov

Mitchell E. Daniels, Jr., Governor
Kyle J. Hupler, Director



December 28, 2005

Bob Waltz
State Entomologist
Indiana Department of Natural Resources
Division of Entomology and Plant Pathology
402 West Washington Street, Room W290
Indianapolis, Indiana 46204

Federal Agency: U.S. Department of Agriculture ("USDA")

State Agency: Indiana Department of Natural Resources, Division of Entomology and Plant Pathology

Re: Gypsy moth eradication program for 2006

Dear Mr. Waltz:

Pursuant to Indiana Code 14-21-1-18 the Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology ("DHPA") has conducted an analysis of the materials provided with your letter dated December 14, 2005, and received by the DHPA on December 16, 2005, for the above indicated project in Allen, St. Joseph, Kosciusko, Noble, Whitley, Elkhart, Porter, LaGrange, LaPorte, Scott, Marshall, and Porter counties, Indiana. Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800, the staff of the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the same materials.

Refer to the following comments provided pursuant to Indiana Code 14-21-1-18:

Based on our analysis, it has been determined that no historic properties will be altered, demolished, or removed by the proposed project.

If any archaeological artifacts, features, or human remains are uncovered during construction, state law (Indiana Code 14-21-1-27 & 29) requires that the discovery must be reported to the Department of Natural Resources.

Refer to the following comments provided pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800:

Based upon the documentation available at Indiana SHPO, we have not identified any historic buildings, structures, districts, objects, or archaeological resources listed in or eligible for inclusion in the National Register within the probable area of potential effects.


Also, be advised that if any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days. In the event that artifacts or features are discovered during the implementation of the federally assisted project, activity, or program and a plan has not been developed, it is the federal agency's responsibility to make reasonable efforts to avoid, minimize or mitigate adverse effects in accordance with 36 C.F.R. § 800.13.

This information has been provided to assist the USDA with the identification of historic properties. Upon completion of the remainder of its identification and evaluation efforts in 36 C.F.R. § 800.4 (a-c), the USDA may analyze the information that has been gathered and proceed to consider the effects on historic properties. Thereafter, the USDA will need to notify the Indiana SHPO and other appropriate parties of the results of its identification and evaluation efforts and its views on whether historic properties may or may not be affected with the appropriate documentation as stated in 36 C.F.R. § 800.4(d). Refer to the following comments:

- 1) If the USDA believes that a determination of "no historic properties affected" accurately reflects its assessment, then it shall provide documentation of its finding as set forth in 36 C.F.R. § 800.11(d) to the Indiana SHPO, notify all consulting parties, and make the finding with supporting documentation available for public inspection (36 C.F.R. §§ 800.4(d)(1) and 800.2(d)(2)).
- 2) If, on the other hand, the USDA finds that an historic property may be affected, then it shall notify the Indiana SHPO, the public and all consulting parties of its finding and seek views on effects in accordance with 36 C.F.R. §§ 800.4(d)(2) and 800.2(d)(2). Thereafter, the USDA may proceed to apply the criteria of adverse effect and determine whether the project will result in a "no adverse effect" or an "adverse effect" in accordance with 36 C.F.R. § 800.5.

A copy of the revised 36 C.F.R. Part 800 that went into effect on August 5, 2004, may be found on the Internet at www.achp.gov for your reference. If you have questions about the comments provided above, please call our office at (317) 232-1646. You may direct any questions concerning historic buildings or structures pertaining to this project to Christopher Koeppel or Dr. Rick Jones. Questions pertaining to archaeological issues should be directed to Karie A. Brudis.

Very truly yours,



Jon C. Smith
Deputy State Historic Preservation Officer

JCS:CDK:KAB:kab